TRANSMITTAL FORM FOR FILING PATENT APPLICATION

Attorney
Docket No.:   VTZON-005XX

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BOX PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C.   20231

Express Mail No: EL418168166US
Date: October 24, 2000

First Named Inventor or Application
Identifier: Avi Nelson

Sir:

Transmitted herewith under 37 CFR § 1.53 for filing is the patent application of:

Inventor: Avi Nelson

Entitled: **ALPHANUMERIC KEYBOARD WITH TELEPHONE DIALING CAPABILITY**

[ ]   This is a request for filing a [ ] **continuation** [ ] **divisional** [ ] **continuation in-part** application under §1.53(b) of prior Application No._____, filed _____ entitled: _____.

Enclosed are:

[X] 13 pages of written description, claims and Abstract, inclusive

[X] 1 sheets of [X] informal [ ] formal drawings of Fig. 1 (one set)

[X]   Oath or Declaration
   [X] Newly executed (original or copy)
   [ ] Copy from prior application (37 CFR 1.63(d)) (for continuation/divisional).
        The entire disclosure of the prior application, from which a copy of the oath
        or declaration is supplied, is considered as being part of the disclosure of
        the accompanying application and is hereby incorporated by reference therein.
   [ ] To be filed later

[X]   Cover sheet and Assignment of the invention to: VERTIZON CORPORATION

[ ]   Certified copy of a _____ application (if foreign priority is
       claimed) with letter claiming priority under Rule 55.

[ ]   Information Disclosure Statement with __ citations

[ ]   Preliminary amendment is enclosed.

[X]   Return receipt postcard

[ ]   Other:

TRANSMITTAL FORM FOR FILING PATENT APPLICATION (CONTINUED)

[X] Verified statement of Small Entity status (§1.9 and §1.27)

[ ] Verified statement of Small Entity was filed in prior application. Status still
     proper and desired

[ ] Priority is claimed under 35 USC § 120 as indicated on the attached sheet 4.

[ ] Priority is claimed under 35 USC §119(a)-(d) as indicated on the attached sheet 4.

[ ] Priority is claimed under 35 USC §119 (e) as indicated on the attached sheet 4.

[X] James F. Thompson is hereby appointed Associate Attorney by:
     Registration No.: 36,699
                                     _____
                                     Attorney of Record: Stanley M. Schurgin
                                     Registration No.: 20,979

[ ] **Power of Attorney** in the originally-filed application has been granted to one or
     more of the registered attorneys listed below. The attorneys listed below not
     previously granted power in the originally-filed application, as well as
     _____, are hereby given associate power:
     Registration No.:

     Stanley M. Schurgin, Reg. No. 20,979   Eugene A. Feher, Reg. No. 33,171
     Charles L. Gagnebin III, Reg. No. 25,467 Beverly E. Hjorth, Reg. No. 32,033
     Paul J. Hayes, Reg. No. 28,307   Holliday C. Heine, Reg. No. 34,346
     Victor B. Lebovici, Reg. No. 30,864   Gordon R. Moriarty, Reg. No. 38,973

[ ] Cancel in this application original claims _____of the prior
     application before calculating the filing fee.

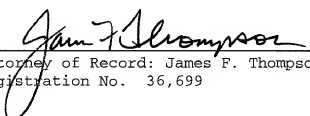| CLAIMS FILED:	MINUS BASE:	EXTRA CLAIMS:	RATE:	BASIC FEE:
				$710.00
Independent	1 - 3	= -0-	x $80.00 =	-0-
Total	25 - 20	= 5	x $18.00 =	$90.00
[ ] Multiple Dependent Claims (1st presentation)			+ $270.00 =	-0-
			SUBTOTAL FILING FEE	$800.00
Small Entity filing, divide by 2.				$400.00
(Note: verified statement must be attached per §1.9, §1.27, §1.28.)				
			TOTAL Filing Fee	$400.00

TRANSMITTAL FOR FILING PATENT APPLICATION (CONTINUED)

[X]   The filing fee has been calculated above; a check in the amount of $400.00 is enclosed.

[ ]   The filing fee will be submitted at a later date.

[X]   In the event a Petition for Extension of Time under 37 CFR §1.17 is required by this paper and not otherwise provided, such Petition is hereby made and authorization is provided herewith to charge Deposit Account No. 23-0804 for the cost of such extension.

[X]   The Commissioner is hereby authorized to charge payment of any additional filing fees under 37 CFR §1.16 associated with this communication or credit any overpayment to Deposit Account No. 23-0804.

[X]   **Customer Number 207**

Address all future communications to:

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Attorney of Record: James F. Thompson
Registration No. 36,699

TRANSMITTAL FOR FILING PATENT APPLICATION (CONTINUED)

[ ] Priority is claimed under 35 USC § 120 of prior Application(s)
      No. _____, filed_____, entitled:

     [ ] The above-identified application(s) is/are assigned of record to:

[ ] Priority is claimed under 35 USC § 119 (a)-(d) of the following application(s).

_____ _____ _____
(Application Number) (Country)   (Filing Date)

_____ _____ _____
(Application Number) (Country)   (Filing Date)

_____ _____ _____
(Application Number) (Country)   (Filing Date)

     [ ]   The above-identified application(s) is/are assigned of record to:

[ ] Priority is claimed under 35 USC § 119 (e) of the following provisional
application(s).

_____   _____
(Application Number)   (Filing Date)

_____   _____
(Application Number)   (Filing Date)

_____   _____
(Application Number)   (Filing Date)

     [ ]   The above-identified provisional application(s) is/are assigned
     of record to:

     [ ]   The claim of small entity status in the above-identified provisional
     application(s) is made in this application and a copy of the small entity
     form(s) from the provisional application(s) is/are enclosed.

SUBMIT IN TRIPLICATE
JFT/raw 236326-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Avi Nelson   **ATTORNEY**
                                                      DOCKET NO.: VTZON-005XX

APPLICATION NO.:   **EXAMINER:**

FILED: **GROUP NO.:**

PATENT NO.:   **ISSUED:**

ENTITLED: ALPHANUMERIC KEYBOARD WITH TELEPHONE DIALING CAPABILITY

VERIFIED STATEMENT AS SMALL ENTITY

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

THE UNDERSIGNED DECLARE(S):

Exclusive rights in the above-identified invention reside in the "small entity(ies)" defined and named below, and "small entity" fees are appropriate. Qualification as a small entity is based upon the appropriately checked statements below:

[ ]   INDEPENDENT INVENTOR(S)

The below-signing independent inventor(s) has (have) not assigned, granted, conveyed or licensed, and is (are) under no obligation under contract or law to assign, grant, convey or license any rights in the invention to any person who could not likewise be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

[X]   SMALL BUSINESS CONCERN

The below-identified small business concern qualifies as a small business as defined in 13 CFR 121.1301 through 121.1305, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, in that the number of employees, including those of its affiliates, which does not exceed 500 persons, and it has not assigned, granted, conveyed or licensed, and is under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Concerns are affiliates of each other when, either directly or indirectly, one concern controls or has the power to control the other, or a third party controls or has the power to control both. The number of employees of the business concern is the average over the fiscal year of the persons employed during each of the pay periods of the fiscal year. Employees are those persons employed on a full-time, part-time or temporary basis during the previous fiscal year of the concern.
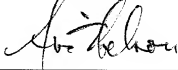
Express Mail Number

EL418168166US

[ ]   **NONPROFIT ORGANIZATION** (Check additional applicable box.)

The below-identified nonprofit organization qualifies as a small entity under 37 CFR 1.9(e) in that it constitutes:

1.   [ ]   a university or other institution of higher education located in any country; or

2.   [ ]   an organization of the type described in Section 501(c)(3) of the Internal Revenue Code of 1954 (26 USC 501(c)(3)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 USC 501(a)); or

3.   [ ]   any nonprofit scientific or educational organization qualified under a nonprofit organization statute of a state of the United States (35 USC 201(i)); or

4.   [ ]   any nonprofit organization located in a foreign country which would qualify as a nonprofit organization under paragraphs (e)(2) or (3) of Rule 1.9 if it were located in the United States.

The undersigned acknowledge(s) the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate (37 CFR 1.28(b)).

The below-signing individual(s) hereby declare(s) that (he, she, they) are authorized to execute this statement on behalf of the small entity.

Name of Small Entity: (Independent Inventor/Small Business/Nonprofit) Vertizon Corporation	
Address of Small Entity: (Street, City, State **or** Country, Zip Code) P.O. Box 81, North Reading, MA 01864	
Name of Person Signing: (Small Business/Nonprofit) Avi Nelson	
Title of Person Signing: (Small Business/Nonprofit) President	
Signature: (Please sign and date in permanent ink.) X	**Date signed:** X 10/16/00

232721

TITLE OF THE INVENTION

Alphanumeric Keyboard with Telephone Dialing Capability

CROSS REFERENCE TO RELATED APPLICATIONS

--None--

5   STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

--Not Applicable--

BACKGROUND OF THE INVENTION

The present invention is related to the field of data and telephony communication devices.

10   A conventional telephone includes a keypad having ten numeric keys, each of which generates a corresponding set of tones on a telephone line to signal a corresponding decimal digit of a telephone number when pressed. This arrangement works well for telephone numbers that are expressed as strings of decimal digits. However, there has been increasing use of what can be referred to

15   as "mnemonic" telephone numbers, i.e., telephone numbers that are expressed as strings of letters alone or letters mixed with decimal digits. For example, telephone numbers of this type are used in nationwide toll-free calling plans employing special area

20   codes such as "800". Many businesses purchase toll-free numbers that can be expressed using a word or phrase associated with the business or its goods or services, in order to make it easier for customers to contact the business.

The conventional telephone keypad allows for use of such

25   mnemonic telephone numbers by simply assigning groups of three letters to each digit. Thus, the letters "A", "B", and "C" are assigned to the digit "2", etc. There is no special functionality in the telephone. Rather, the letters are merely printed on each

digit key. However, this set of letter-to-digit assignments is not easily remembered. A user dialing a mnemonic telephone number generally must scan the keypad multiple times during dialing, in order to find the correct key to press for each letter of the mnemonic telephone number. This process is inefficient and error-prone. It would be desirable to provide for a more efficient and error-free way of dialing mnemonic telephone numbers.

BRIEF SUMMARY OF THE INVENTION

In accordance with the present invention, an alphanumeric keyboard is disclosed that provides for direct entry of a mnemonic or letter-based telephone number by a user. The keyboard provides a translation between each of the 26 letter keys and the set of signals for the corresponding decimal digit. Because the user is thus freed of the task of finding the correct digit key to press, dialing efficiency and accuracy are improved.

During operation, the disclosed keyboard is connected to a telephone line and may function in either of two operating modes. In a first operating mode, the keyboard generates telephone number dialing signals (i.e., pulse signals or dual-tone multi-frequency (DTMF) signaling tones) on the telephone line as corresponding alphanumeric keys of the keyboard are pressed. Thus, as a user enters the letters D-O-G by pressing the corresponding single-letter keys of the keyboard, for example, the DTMF signaling tones for the digits 3, 6 and 4 respectively are generated on the telephone line. In an enhanced version, the keyboard assigns distinct signal tones, such as an expanded dual tone multi-frequency (DTMF) set, to each alphanumeric character. This significantly increases the quantity of potential telephone numbers a future telephone might access.

In a second operating mode, the keyboard generates alphanumeric character code signals, such as American Standard for

Communications Interface Interchange (ASCII) code signals, on the telephone line as corresponding keys of the keyboard are pressed. This feature enables cooperating equipment on the other end of the line to receive text messages and other data from the keyboard

5   after a connection has been established.

The selection of operating mode may be manual, such as by a user-operated switch, or may be automatic. When the keyboard is connected to the telephone line along with a conventional telephone, for example, the keyboard can select the first

10   operating mode when the telephone is in an "off-hook" condition and no connection on the telephone line has been established. The second operating mode can be selected when the telephone is in an off-hook condition and a connection on the telephone line has been established.

15   The disclosed keyboard employs the same mapping of alphabet characters to dialing signals as used on conventional telephones, namely, the three-to-one mapping of (A,B,C) to "2", (D,E,F) to "3", etc. However, it is contemplated that the present invention can be used in future telephone systems having expanded dialing

20   capacity. For example, each alphabet character may be associated with a different telephone number dialing signal, so that a much larger number of multi-character telephone numbers can be generated.

Other aspects, features, and advantages of the present

25   invention are disclosed in the detailed description that follows.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

Figure 1 is a block diagram of a telephone and keyboard arrangement in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

30   In Figure 1, an alphanumeric keyboard 10 is connected to a telephone line 12 along with a telephone 14, and the telephone

line 12 is connected to a telephone wall jack 16. The keyboard 10 may be of the general type commonly used with a personal computer. For example, the keyboard 10 may be similar to the 101-key keyboard commonly referred to as a "PS/2-compatible" keyboard, while also incorporating circuitry enabling it to perform the functions described below.

The keyboard 10 is usable in two different operating modes. The operating mode may be selected in response to a user indication, such as the setting of a switch (not shown). Alternatively, the keyboard 10 can automatically enter one of the two operating modes based on the status of the telephone line 12. In such a case, the first mode is operative when the telephone 14 is in an off-hook state (i.e., when the handset is off the cradle or the "speaker phone" operating mode is active), but no connection has been established on the telephone line 12. The second mode is operative when the telephone 14 is in an off-hook state and a connection has been established on the telephone line 12.

In the first operating mode, the keyboard 10 generates signaling tones or pulses on the telephone line 12 as a user presses keys corresponding to the digits of a telephone number, in a manner analogous to conventional "touch tone" telephones. The keys used in this mode may be the numeric keys at the top of the keyboard, the numeric keys arrayed in adding-machine style at one side of the keyboard, or some other set of keys that have been designated for such use. Additionally, the letter keys may also be used to dial telephone numbers that are expressed mnemonically, such as 800 numbers. Sets of letters are associated with the digits "2" through "9" as on a telephone keypad, i.e., the letters "A", "B", and "C" are associated with the digit "2", the letters "D", "E", and "F" are associated with the digit "3", etc. Thus when the letter keys D-O-G are pressed, for example, signaling tones are generated for the digits 3, 6 and 4, respectively.

Apart from the number and letter keys, the "*" and "#" keys on the keyboard 10 can also be used to generate their counterpart telephone dialing signal tones, as with a conventional telephone keypad. Thus, in the first operating mode the disclosed keyboard can function as a self-contained alternate dialing means to the keypad on a conventional telephone. The keyboard 10 may be connected in parallel with the telephone 14 so that either the keyboard 10 or the conventional keypad on the telephone 14 may be used as a means for generating dialing signals.

In the second operating mode, the keyboard 10 includes the function commonly associated with a data modem, that is, generating tone patterns that represent codes (such as ASCII codes) for alphanumeric and other characters. These codes are generated on the telephone line 12 when corresponding keys on the keyboard are pressed. Thus for example, the ASCII code for the letter 't' is generated when the "T" key is pressed and both the "shift" and "shift lock" keys are not active. Similarly, the code for the character "*" is generated when the number "8" is pressed and either the "shift" or "shift lock" key is active. These codes can be received and interpreted by cooperating equipment at the other end of the connection, such as a computer connected to the telephone system by a modem.

Although the above-described operation provides compatibility with existing telephone equipment, a slightly different embodiment may be used with future telephone systems having more than ten or twelve distinct dialing signals. For example, a future telephone system may employ a sufficient number of distinct dialing signals to enable each alphabet character as well as each decimal digit to be uniquely represented. In such a system, the keyboard 10 preferably generates a distinct dialing signal for each different character key and each different number key. These dialing signals may be part of an expanded multi-frequency tone set, with sufficient distinct tone patterns to represent all the desired

characters and numbers. Such a tone set may be an expansion of the DTMF system currently in wide use in conventional telephone systems. Alternatively, the dialing signals may consist of coded pulses or other signaling elements.

5   The keyboard 10 may be equipped with processing, storage and display capabilities (not shown), and/or may be capable of receiving coded information via the telephone line 12 as well as sending it as described above. Such an enhanced version of the keyboard 10 can be used in a variety of different ways. For example, a user may enter a message into memory using the alphanumeric keys, while viewing the message being entered on the display. The user can then instruct the keyboard 10 to send the entire message on the telephone line 12 when a subsequent connection is made. Such functionality can form part of an electronic mail system, for example. The display can also be used to display the digits of telephone numbers as they are dialed, in a manner similar to many conventional office telephones.

       Additionally, such an enhanced version of the keyboard 10 can also include call-answering and caller identification (ID) functionality. The keyboard 10 may accept messages from only particular callers, and provide the messages and the respective identities of the callers to a user upon request. Additionally, messages can be pre-recorded by a user and then transmitted to particular callers. Records of received and transmitted messages,
25   callers, and other information such as time of call, etc, can be kept and provided to the user upon request.

       An enhanced version of the keyboard 10 may also conveniently include an interface to a printer for generating hard copy of desired information, such as received messages, etc.
30   Additionally, when the telephone 14 is in an on-hook state, the user can enter telephone numbers, names, and other information via the keyboard for storage in non-volatile memory. These telephone numbers can then be retrieved and dialed automatically in

response, for example, to the user's pressing a "dial" command key.

In the illustrated embodiment, the keyboard 10 is separate from the telephone 14, and thus may be transported and used with other telephones.   It may be desirable in an alternative embodiment to include the keyboard 10 and telephone 14 in the same physical package, as indicated by dotted lines 18 in Figure 1.   In general, the alphanumeric keyboard is a keyboard containing numbers and letters and/or other symbols commonly found on a typewriter or computer keyboard.

It will be apparent to those skilled in the art that other modifications to and variations of the above-described technique are possible without departing from the inventive concepts disclosed herein.   Accordingly, the invention should be viewed as extending to the full scope and spirit of the appended claims.

CLAIMS

What is claimed is:

1. An alphanumeric keyboard being connectable to a telephone line, the alphanumeric keyboard being operative to generate telephone number dialing signals on the telephone line as corresponding keys of the alphanumeric keyboard are pressed.

2. An alphanumeric keyboard according to claim 1, wherein the generating of telephone number dialing signals occurs when the alphanumeric keyboard is operating in a first operating mode, and wherein the keyboard is operative in a second operating mode to generate alphanumeric character code signals on the telephone line as corresponding keys of the keyboard are pressed.

3. An alphanumeric keyboard according to claim 2, the keyboard being operative to automatically enter the first operating mode when a local telephone device connected to a common telephone line with the keyboard is in an off-hook condition and no connection on the telephone line has been established, and the keyboard being operative to automatically enter the second operating mode when the local telephone device is in an off-hook condition and a connection on the telephone line has been established.

4. An alphanumeric keyboard according to claim 3, disposed in a common housing with the local telephone device.

5. An alphanumeric keyboard according to claim 2, the keyboard being operative to enter the first and second operating modes in response to corresponding indications from a user.

6. An alphanumeric keyboard according to claim 5, including a switch by which the user makes the operating mode indications.

7. An alphanumeric keyboard according to claim 2, wherein the alphanumeric character code signals represent American Standard for Communications Information Interchange (ASCII) character codes.

8. An alphanumeric keyboard according to claim 2, including a display.

9. An alphanumeric keyboard according to claim 8, wherein the display is operative to display digits corresponding to the telephone number dialing signals as they are generated on the telephone line.

10. An alphanumeric keyboard according to claim 8, wherein the display is operative to display alphanumeric characters corresponding to alphanumeric character code signals generated on the telephone line.

11. An alphanumeric keyboard according to claim 2, including a display, memory, and processing logic.

12. An alphanumeric keyboard according to claim 11, further operable in a third operating mode, the keyboard being operative in the third operating mode to (i) accept a message entered by a user via the keys of the keyboard and (ii) store the entered message in the memory, and wherein the keyboard is further operative in the second operating mode to generate on the telephone line a sequence of alphanumeric character code signals representing the stored message.

13. An alphanumeric keyboard according to claim 12, wherein the keyboard is operative to automatically enter the third operating mode when the local telephone device is in an on-hook condition.

14. An alphanumeric keyboard according to claim 11, being further operative in the second operating mode to (i) answer an incoming call on the telephone line, (ii) identify the caller who has placed the incoming call, and (iii) generate on the telephone line a sequence of alphanumeric character code signals representing a message previously stored in the memory, if the caller is identified as an intended recipient of the message.

15. An alphanumeric keyboard according to claim 14, being further operative to maintain a record of the incoming call and to provide the record to a user upon request.

16. An alphanumeric keyboard according to claim 11, including an interface to a printer.

17. An alphanumeric keyboard according to claim 11, being further operative to accept and store a user-entered telephone number in the memory, and being operative in the first operating mode to generate on the telephone line, upon a command from the user, a sequence of telephone number dialing signals corresponding to the stored telephone number.

18. An alphanumeric keyboard according to claim 11, being further operative to (i) receive a message from the telephone line, (ii) store the received message in the memory, and (iii) display the stored message to a user upon request.

19. An alphanumeric keyboard according to claim 1, wherein the telephone number dialing signals are dual-tone multi-frequency signals.

20. An alphanumeric keyboard according to claim 1, wherein the telephone number dialing signals are pulse signals.

21. An alphanumeric keyboard according to claim 1, wherein (i) the telephone number dialing signals are associated with respective decimal digits, (ii) certain ones of the telephone number dialing signals are further associated with respective sets of letter characters, and (iii) each telephone number dialing signal is generated in response to the pressing of the key for the associated decimal digit and in response to the pressing of the key for each letter character in the associated set of letter characters.

22. An alphanumeric keyboard according to claim 1, wherein (i) certain ones of the telephone number dialing signals are associated with respective decimal digits, (ii) certain other ones of the telephone number dialing signals are associated with respective letter characters, and (iii) each telephone number dialing signal is generated in response to the pressing of the key for the associated decimal digit or letter character.

23. An alphanumeric keyboard according to claim 22, wherein the telephone number dialing signals are associated with a multi-frequency tone set.

24. An alphanumeric keyboard according to claim 23, wherein the telephone number dialing signals are associated with a dual tone multi-frequency tone set.

25. An alphanumeric keyboard according to claim 1, wherein the telephone number dialing signals are uniquely associated with respective alphanumeric characters, and wherein each telephone number dialing signal is generated in response to the pressing of

5   the key for the associated alphanumeric character.

ABSTRACT OF THE DISCLOSURE

An alphanumeric keyboard connects to a telephone line and is operable in two operating modes. The keyboard is in a first operating mode when the telephone is in an "off-hook" condition and no connection on the telephone line has been established. In the first operating mode, the keyboard generates telephone number dialing signals on the telephone line as corresponding alphanumeric keys of the keyboard are pressed. Thus for example as a user enters the letters D-O-G by pressing the corresponding single-letter keys of the keyboard, the signaling tones for the digits 3, 6 and 4 are generated on the telephone line. In an enhanced version, the keyboard assigns distinct signal tones, such as an expanded dual tone multi-frequency (DTMF) set, to each alphanumeric character, thereby significantly increasing the quantity of potential telephone numbers. The keyboard operates in a second operating mode when the telephone is in an off-hook condition and a connection on the telephone line has been established. In this mode, the keyboard generates alphanumeric character code signals such as ASCII code signals on the telephone line as corresponding keys of the keyboard are pressed. This feature enables cooperating equipment on the other end of the line to receive text messages and other data from the keyboard after a connection has been established. An enhanced version of the keyboard has a processor, memory and a display to permit a variety of additional features to be realized, such as electronic mail messaging.
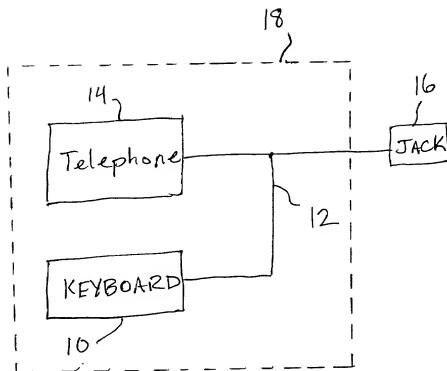
228210_1

Fig. 1

DECLARATION AND POWER OF ATTORNEY

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ALPHANUMERIC KEYBOARD WITH TELEPHONE DIALING CAPABILITY

the specification of which (check one):

[X] **is attached hereto.** [ ]   **was filed** _____ **as Application No.**_____;
                                     amended on _____ **(if applicable).**

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations §1.56(a).

I hereby claim foreign priority benefits under Title 35, USC §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)		Date Filed	Priority Claimed	
			[ ] Yes	[ ] No
(Number)	(Country)	(Day/Month/Year)		
			[ ] Yes	[ ] No
(Number)	(Country)	(Day/Month/Year)		
			[ ] Yes	[ ] No
(Number)	(Country)	(Day/Month/Year)		

I hereby claim the benefit under Title 35, USC §119(e) of any United States provisional application(s) listed below:

_____   _____
(Application Number)   (Filing Date)

_____   _____
(Application Number)   (Filing Date)

_____   _____
(Application Number)   (Filing Date)

Express Mail Number
EL418168166US

I hereby claim the benefit under Title 35 USC §120 of any United States application(s) listed below and insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35 USC §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application No.)	(Filing Date)	(Patented/pending/abandoned)
(Application No.)	(Filing Date)	(Patented/pending/abandoned)
(Application No.)	(Filing Date)	(Patented/pending/abandoned)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) to prosecute this application and transact all business connected therewith in the Patent and Trademark Office, and to file with the USRO any International Application based thereon.
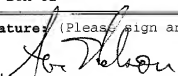
Stanley M. Schurgin, Reg. No. 20,979	Eugene A. Feher, Reg. No. 33,171
Charles L. Gagnebin III, Reg. No. 25,467	Beverly E. Hjorth, Reg. No. 32,033
Paul J. Hayes, Reg. No. 28,307	Holliday C. Heine, Reg. No. 34,346
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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